



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,406	09/23/2005	Ralf Muckel	DE 020190	4836

24737 7590 11/21/2007
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

WALFORD, NATALIE K

ART UNIT	PAPER NUMBER
----------	--------------

2879

MAIL DATE	DELIVERY MODE
-----------	---------------

11/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,406

Applicant(s)

MUCKEL ET AL.

Examiner

Natalie K. Walford

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2005 and 20 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The Amendment, filed on September 14, 2007, has been entered and acknowledged by the Examiner. Claims 1-15 and 17-20 are pending in the instant application.

Claim Objections

Claims 2,3 are objected to because of the following informalities:

Regarding claims 2,3 the Examiner does not understand how one with ordinary skill in the art would calculate the diffuseness of the discharge arc or the discharge arc curvature of the mercury-free gas discharge lamp so that the diffuseness increases by .01 -1.5 mm and arc curvature decreases by 0.01 mm up to 0.5mm in comparison with a corresponding gas discharge lamp without the pattern. It is not reasonably described in the specification, so the Examiner does not see how the diffuseness and discharge arc curvature are calculated.

Appropriate clarification is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claims 1 and 18, claims 1 and 18 are rendered indefinite due to the fact that is unclear as to how the outer bulb comprises a pattern. The bulb comprises a pattern of what? The function of the pattern, specifically, that the pattern is configured to increase a diffuseness of the discharge arc, does not specify the scope of the claim for the structure of the lamp. For examination purposes, the examiner will take the pattern to be a layer that increases diffuseness of the lamp. The Examiner notes however, that the pattern can refer to many different things (i.e. layer, a particle dispersed on bulb, or many particles dispersed on bulb), and the Examiner has picked only one pattern. The Applicant should clearly define the claim such that one with ordinary skill would understand the subject matter. Since claims 2-15, 17, and 19-20 depend on independent claims 1 and 18, they are rendered indefinite as well.

The Examiner also notes that since the limitation regarding the pattern is unclear, all subsequent limitations are indefinite as well.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-8, and 11-15 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitman et al. (US 5,723,937).

Regarding claim 1, Whitman discloses a mercury-free gas discharge lamp (item 70) in figure 3 comprising an inner vessel (item 50) including electrodes (not shown) for providing a

discharge arc; and an outer bulb (item 72), wherein at least one of the inner vessel and the outer bulb comprises a pattern (item 26) configured to increase diffuseness of the discharge arc, wherein the pattern includes shapes which are overlapping (see FIG. 1) along an axis parallel to the at least one of the inner vessel and the outer bulb when viewed from a direction perpendicular to the axis (see FIG. 1). The Examiner notes that since the pattern has not been clearly defined, the overlapping may be seen in figure 1 of Whitman, wherein the particles are over top of each other (i.e. overlapping).

Regarding claim 2, Whitman discloses the mercury-free gas discharge lamp as claimed in claim 1, wherein the pattern is configured to increase the diffuseness of the discharge arc of the mercury-free gas discharge lamp by 0.01 mm up to 1.5 mm in comparison with a corresponding gas discharge lamp without the pattern (see FIG. 4).

Regarding claim 3, Whitman discloses the mercury-free gas discharge lamp as claimed in claim 1, wherein the pattern is configured to reduce the discharge arc curvature of the mercury-free gas discharge lamp by 0.01 mm up to 0.5 mm in comparison with a corresponding gas discharge lamp without the pattern (FIG. 4).

Regarding claim 4, Whitman discloses the mercury-free gas discharge lamp as claimed in claim 1, wherein the mercury-free gas discharge lamp is at least one of a mercury-free high-pressure gas discharge lamp, and a mercury-free xenon high-pressure gas discharge lamp (see FIG. 3).

Regarding claim 6, Whitman discloses the mercury-free gas discharge lamp as claimed in claim 1, wherein the at least one of the inner vessel and the outer bulb is made of at least one of glass and ceramic materials (column 3, lines 49-50).

Regarding claim 7, Whitman discloses the mercury-free gas discharge lamp as claimed in claim 1, wherein the at least one of the inner vessel and the outer bulb has the pattern at least one of on its outer surface facing away from the discharge arc, on its outer surface facing the discharge arc, and within the inner vessel or bulb material (see FIG. 3, item 26).

Regarding claim 8, the claim is directed to the method of manufacturing a mercury-free gas discharge lamp, in view of an absence of a showing that the method imparts distinctive structural characteristics to the final product, the limitations directed to the method of manufacturing are not germane to the issue of patentability of the device.

Regarding claim 11, Whitman discloses the mercury-free gas discharge lamp of claim 1, wherein the pattern is further configured to provide an optical impression when viewed from an exterior of the mercury-free gas discharge lamp, the optical impression showing a change in a viewed position of a brightest spot of the discharge arc despite lack of an actual change of an actual position of the brightest spot within the mercury-free gas discharge lamp (FIGS. 3-4).

Regarding claim 12, Whitman discloses the mercury-free gas discharge lamp of claim 1, wherein the pattern is further configured to not change an actual position of a brightest spot of the discharge arc and yet provide an optical impression showing a perceived change in a perceived position of a brightest spot when viewed from an exterior of the mercury-free gas discharge lamp (FIGS. 3-4).

Regarding claim 13, Whitman discloses the mercury-free gas discharge lamp of claim 1, wherein the pattern includes at least one of lines, dots, circles, rectangles, and polygons (FIG. 3).

Regarding claim 14, Whitman discloses the mercury-free gas discharge lamp of claim 13, wherein the lines includes at least one of straight, curved, wavy, and spiraling lines (FIG. 3).

Regarding claim 15, Whitman discloses the mercury-free gas discharge lamp of claim 13, wherein the pattern includes shapes of at least one of same and different sizes, and they may be partly or fully planar in shape (FIGS. 1b and 3).

Regarding claim 17, Whitman discloses the mercury-free gas discharge lamp of claim 1, wherein the pattern includes shapes, which are at least one of partly and fully planar (FIGS. 1b and 3).

Regarding claim 18, Whitman discloses a discharge lamp (item 70) in figure 3 comprising: an inner vessel (item 50) including electrodes (not shown) for providing a discharge arc; and an outer bulb (item 72), wherein at least one of the inner vessel and the outer bulb comprises a pattern (item 26) configured to increase diffuseness of the discharge arc, wherein the pattern includes shapes which are overlapping (see FIG. 1) along an axis parallel to the at least one of the inner vessel and the outer bulb when viewed from a direction perpendicular to the axis (see FIG. 1). The Examiner notes that since the pattern has not been clearly defined, the overlapping may be seen in figure 1 of Whitman, wherein the particles are over top of each other (i.e. overlapping).

Regarding claim 19, Whitman discloses the mercury-free gas discharge lamp of claim 18, wherein the pattern is further configured to provide an optical impression when viewed from an exterior of the discharge lamp, the optical impression showing a change in a viewed position of a brightest spot of the discharge arc despite lack of an actual change of an actual position of the brightest spot within the gas discharge lamp (FIGS. 3-4).

Regarding claim 20, Whitman discloses the mercury-free gas discharge lamp of claim 18, wherein the pattern is further configured to not change an actual position of a brightest spot of

the discharge arc and yet provide an optical impression showing a perceived change in a perceived position of a brightest spot when viewed from an exterior of the discharge lamp (FIGS. 3-4).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitman et al. (US 5,723,937).

Regarding claim 5, Whitman discloses the mercury-free gas discharge lamp as claimed in claim 1, but does not expressly disclose that the light losses of the mercury-free gas discharge lamp as compared with a gas discharge lamp without the pattern amount to ≤ 90 lumens and ≥ 5 lumens, as claimed by Applicant. Whitman does disclose that the pattern has been found to be particularly useful in improving the illumination efficacy or efficiency of lamps (column 5, lines 6-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the light losses of the mercury-free gas discharge lamp as compared with a gas discharge lamp without the pattern amount to ≤ 90 lumens and ≥ 5 lumens, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 9, Whitman discloses the mercury-free gas discharge lamp as claimed in claims 1, but does not expressly disclose that the pattern covers a surface area of 2 mm² to 12 mm², said surface area being arranged over a brightest spot in the discharge arc, as claimed by Applicant. Whitman does disclose though that the pattern covers a surface that has a particular surface area (column 4, lines 13-26). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pattern covers a surface area of 2 mm² to 12 mm², said surface area being arranged over a brightest spot in the discharge arc, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 10, Whitman discloses the mercury-free gas discharge lamp as claimed in claim 1, but does not expressly disclose that the mercury-free gas discharge lamp is configured for motor vehicles, as claimed by Applicant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the mercury-free gas discharge lamp configured for motor vehicles, since it is known in the art that discharge lamps are commonly used in motor vehicles in the headlight.

Response to Arguments

Applicant's arguments filed September 14, 2007 have been fully considered but they are not persuasive. The Examiner respectfully disagrees with Applicant's arguments. The Examiner first points to figure 2 of Whitman, which clearly shows particles that overlap when looked at from an upper view. Independent claims 1 and 18 require that the particles overlap on a certain

axis. With that, the particles overlap when you take the axis to be one way and do not overlap when the axis is taken in the other direction. Hence, the claim limitations are met as set forth.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

Application/Control Number:
10/524,406
Art Unit: 2879

Page 10

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nkW

Natali Walcott
11/19/07

/Sikha Roy/

11/19/07

Primary Examiner, Art Unit 2879